The MAC Flyer

OCTOBER 1976

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CAPT BRUCE L. GUMBLE Associate Editor
ISOBEL M. BRYANT Managing Editor
BRIAN L. GAUSS Art Director

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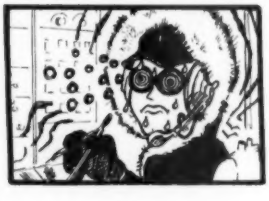

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Flyer Call

When we got the word, it was like a bad dream—it wasn't really happening. As the replication of messages, rumors, and phone calls corroborated the initial whispers, we drifted rather slowly into shock. We moved slowly, each had just the slightest edge of a tear in his eye—the lump in the throat—a feeling of uselessness. We had failed.

"Sweet dreams and flyin' machines in pieces on the ground . . ." James Taylor sang it well. And those words ran through our minds. Why had we failed?

We guys in the fly safe business keep looking for the right way to sell our product—the right pitch. Sometimes, we wonder if we really have a product. "The flight safety challenge appears in many forms . . ." is the lead-in for a story appearing in this issue. And the challenge is . . . amorphous.

We candy coat it so it doesn't sound like we're preaching. We'll use a pretty girl to catch your attention. Maybe you'll read the story and benefit from the experiences of others. Our unofficial motto is, "We'll stoop to almost anything to save a life."

And we failed—numerous lives snuffed out in those two crashes just three hours apart. Perhaps we're not doing it right. Let us have your ideas—

And fly safe.

The Art of Listening

lis-ten (lis'ən), *v.t., v.i.* 1. to give attention with the ear; attend closely for the purpose of hearing.

Did he say "9,000" or "5,000"? Was that a left or right turn? Did he say "go to ground" or "go around?"

The foreign air carrier was headed for South Africa with intermediate stops in Europe and east Africa. The first leg was uneventful; the second was flown at flight level 330/370 en route to Nairobi. About an hour after sunrise, the commercial jet was some 150 miles from destination. The pilot briefed the copilot and engineer on the approach and landing. Following normal company procedures, he discussed the airdrome at Nairobi, noting that the field elevation was 5,327 feet MSL. The crew set 5,627 feet in for the manual minimum altitude and 200 feet in the radio altimeters—the latter being the coupled approach minimum height above touchdown. The updated weather report was two-eighths cloud cover at 800 feet. Later, Nairobi revised the estimate based on a PIREP; cloud bases were reported at 300 feet.

The aircraft was cleared to FL 120 approximately 47 miles north of Nairobi by Nairobi Radar, which had a positive I.D. on the jumbo. Then at the IAF (approximately 17 miles from touchdown), the aircraft was advised to "descend to seven five zero zero feet; QNH is one zero two zero decimal five (millibars)."

The crew noticed that they were passing the IAF both visually and by reference to the ADF needles. The skies were clear up to the IAF, but the plateau surrounding the airport was covered by low clouds.

The copilot responded to the clearance, "Roger . . . cleared to five thousand feet, on one zero two zero decimal five." The radar controller did not respond to the readback. Neither pilot had heard the clearance correctly and believed the cleared altitude to be 5,000 feet vice 7,500 feet. The engineer also missed the copilot's readback and later stated that, although he thought the word "seven" was indistinct, he had no doubt that the cleared altitude was 7,500 as depicted on the airfield approach chart as the intermediate approach altitude.

The copilot dialed 5,000 in the altitude selector on the autopilot/flight director mode selector. The flight engineer saw this action but did not see the altitude selected as he was checking the ILS coding at the time.

As the airspeed dropped below 230 KIAS the pilot called for the first flap increment and the flight engineer started the approach check. With the aircraft still on autopilot, both pilots set QNH in their altimeters; the copilot announced that, since they had passed the IAF, they could now descend below the minimum safe sector altitude. Both pilots began tuning the ADF's for

the approach and were so preoccupied with other cockpit duties that the engineer had to repeat the altimeter setting challenge three times.

The aircraft passed through 8,600 feet with a descent rate of about 1,900 fpm. They soon entered the cloud deck and lost all visual reference with ground. As the jetliner passed through 2,500 feet AGL, the terrain clearance audio warning sounded and was duly noted by the crew.

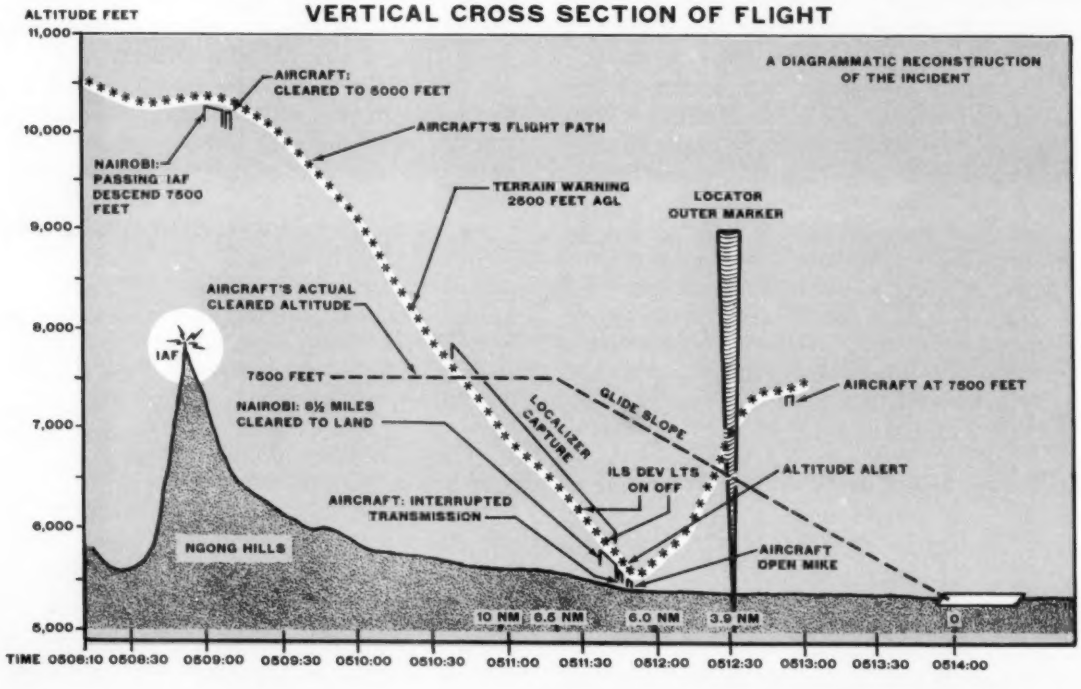
Nairobi Radar announced that the aircraft was 15 miles from the runway and cleared for ILS approach. The pilot dialed in the ILS frequency, placed the autopilot mode select to LAND, and called for approach flaps in preparation for the coupled approach.

As the aircraft descended through approximately 7,700 feet, the autopilot initiated automatic capture turning left onto the localizer—the rate of descent, around 2,000 feet per minute. At 6,000 feet MSL, the copilot called "one thousand to go" and shortly afterward there was an audio warning alerting the crew that they were approaching their selected altitude. Both pilot's and copilot's ILS deviation warning lights came on, but this was interpreted to be a false indication. The flight engineer noticed this, and also that the glide slope indicator was out of view on the UP side. With the aircraft still descending, the engineer called, "We have no glide slope." The pilot responded, "We have." (The pilot's response only meant that the equipment was functioning properly; he explained later that he thought the engineer had meant the equipment had failed.)

At eight and a half miles from touchdown, the copilot was responding to the landing clearance but broke off in mid-word as the decision height audio warning sounded. With an airspeed of 217 knots and descending at about 1,650 feet per minute, the aircraft passed 270 feet above ground level. The engineer called, "Two hundred feet decision height"; as the aircraft broke out of the clouds, he directed, "Give full power! Give full power!" and then another warning, "Check height! Check height!"

The pilot by now had a positive visual on some rather unfriendly terrain and pulled back on the yoke, tripped the autopilot, and pushed the throttles full forward. After climbing to 7,500 feet, the aircraft was vectored back to the ILS for recovery.

The flight recorder indicated that the aircraft had come within 70 feet of contacting terra firma.



Are You Listening?

The odd thing about this one is that the pilot chose not to respond to any of the engineer's warnings. Only upon visual contact with the ground did he decide that he had made a mistake.

Suppose it had been night. Or raining. Or the cloud bases had been even lower.

There's little doubt that this mishap would not have made print had the pilots correctly understood their clearance to 7,500 feet. Or if the copilot had demanded a "copy" from the controlling agency when he read back the erroneous altitude. Or if either of the pilots had noticed that they were "cleared" to an altitude some 327 feet below the field elevation. Or had they heeded *any* of the warnings of the flight engineer.

Listen Up

Put yourself in the driver's seat. How would you respond to a navigator's warning, "Hey, Boss, we've got terrain around us that's higher than we are"? Be honest. One pilot was heard to respond, "That's okay, we're visual." It is more than likely that those were his last mortal words. He elected to continue the descent and spread bits and pieces of his aircraft and its occupants along a narrow strip of rural countryside.

Listen In

"Let's get some altitude! We've got a hill 3,050 feet high out there!"

It was a missed approach at Cubi Point.

"That's okay; we're at 3,100," was the response.

Is 50 feet enough for you?

Listen

The C-130 was cleared to 7,000 feet from FL 280.

"Pilot, navigator," the young lieutenant spoke into his mike, "we were cleared to 7,000 and I've got you passing seven now."

"Check again, Lieutenant," the pilot corrected, "That's 17,000."

"Oh— sorry."

"Never be sorry," the sage responded, "I'd rather you tell me every time, and be wrong, than to keep quiet once—and be right."

If that's your attitude, you've broken the code—you're on your way to building that longevity and accumulating some rockin' chair time.

—Adapted from *Flight Safety Focus*

"I know that you believe you understand what you think I said, but I am not sure you realize that what you heard is not what I meant."

What the Captain Really Means

Sometimes it's not what you don't know that hurts you; it's what you know that ain't so.

Communications between pilots and air traffic controllers have been getting a good deal of attention lately. Misunderstood clearances and other failures to communicate have led aircraft into mountainsides, swamps, and midair collisions, and as air traffic gets more and more dense, the problem intensifies.

There's not much that can be done about simple failure to hear what the man said. But something *has* been done to make sure that when you do hear what he said, you also know exactly what he meant. The May 1976 Airman's Information Manual, part 1, which is published by the FAA contains a glossary of terms used by pilots and controllers; it's intended to provide exact definitions for the words and phrases we commonly use in flight operations.

The AIM is available at your friendly local base ops, and would be very rewarding study material during your next chunk of spare time. Many of the definitions are completely familiar, but others may surprise you just a little. We've included a few here that we think you'll be interested in. (The italics are ours.)

ABEAM—An aircraft is "abeam" a fix, point or object when that fix, point or object is approximately 90 degrees to the right of left of the aircraft track. Abeam indicates a *general position* rather than a precise point.

CLEARED FOR APPROACH—ATC authorization for an aircraft to execute *any standard or special instrument approach procedure* for that airport. Normally, an aircraft will be cleared for a specific approach procedure.

CRUISE—Used in an ATC clearance to authorize a pilot to conduct flight at any altitude from the minimum IFR altitude up to and including the altitude specified in the clearance. The pilot may level off at any intermediary altitude within this block of airspace. Climb/descent within the block is to be made at the discretion of the pilot. However, once the pilot starts descent and reports leaving an altitude in the block *he may not return to that altitude without additional ATC clearance.* Further, it is approval for the pilot to proceed to *and make an approach* at destination airport . . . .

EN ROUTE DESCENT—Descent from the en route cruising altitude which takes place *along the route of flight.*

EXECUTE MISSED APPROACH—Instructions issued to a pilot making an instrument approach which means *continue inbound to the missed approach point* and execute the missed approach procedure as described on the IAP chart or as previously assigned by ATC. *The pilot may climb immediately* to the altitude specified in the missed approach procedure . . . . When conducting an ASR or PAR approach, execute the assigned missed approach procedure *immediately* upon receiving instructions to "execute missed approach."

GROUND CONTROLLED APPROACH/GCA—A radar approach *system* operated from the ground . . . . Usage of the term "GCA" by pilots is discouraged except when referring to a GCA *facility*. Pilots should specifically request a "PAR" approach . . . or request an "ASR" or "surveillance" approach . . . .

HAVE NUMBERS—Used by pilots to inform ATC that they have received *runway and wind information only.*

IMMEDIATELY—Used by ATC when such action is required *to avoid an imminent situation.*

MINIMUM FUEL—Indicates that an aircraft's fuel supply has reached a state where, upon reaching the destination, it can accept little or no delay. *This is not an emergency situation* but merely indicates an emergency situation is possible should any undue delay occur.

NO GYRO APPROACH/VECTOR—A radar approach/vector provided in case of a malfunctioning *gyrocompass or directional gyro.* (Ed. Note—*not* an attitude gyro.)

PROCEDURE TURN INBOUND—That point of a procedure turn maneuver where *course reversal has been completed and an aircraft is established inbound* on the intermediate approach segment or final approach course. A report of "procedure turn inbound" is normally used by ATC as a position report *for separation purposes.*

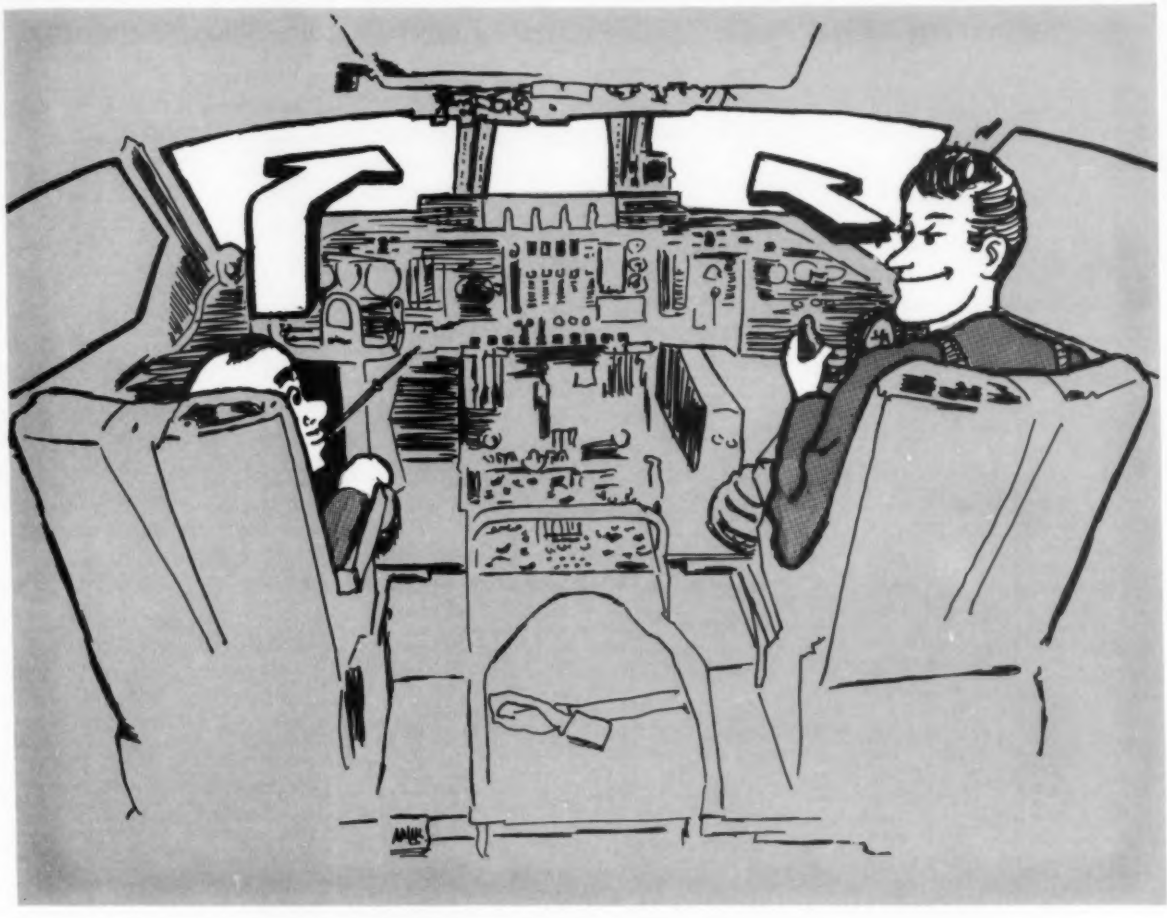
RADAR SAFETY ADVISORY—A radar advisory issued by ATC to radar identified aircraft under their control if an aircraft is observed to be at an altitude which, in the controller's judgment, places the aircraft in unsafe proximity to terrain, obstructions, or other aircraft.

ROGER—I have received all of your last transmission. *It should not be used to answer a question requiring a yes or no answer.*

SAY ALTITUDE—Used by ATC to ascertain an aircraft's specific altitude/flight level. When the aircraft is climbing or descending, the pilot should state the indicated altitude *rounded to the nearest 100 feet.*

If none of this was new to you, you're obviously a stellar aviator who does his homework and will live to a ripe old age. But if you found an eye-opener or two, maybe you ought to dig up a copy of the AIM and read the rest of the list. After all, nobody ever got in trouble by knowing what he was talking about.

When you're trying to land an airplane, there's only one viewpoint that's right.



What's Your Viewpoint?

Well, I always run the seat all the way forward and all the way down, and then come back four notches and up two."

"I sit so I can see half the rain removal fairing."

"If I can see half of the IFF antenna, I know I'm right."

Ask any pilot how he adjusts his seat when he gets into the airplane and you'll probably get a highly personalized answer. He may have picked up his method from an instructor at TTU or from his first aircraft commander, or he may have developed it gradually over a period of time. But in any case, it will have two things in common with every other "personal" technique: He *always* uses it, and it works.

How important is seating height, anyway? Maybe it's more important than you thought. Recent studies by an FAA-appointed advisory group and by McDonnell-Douglas both reached the same conclusion: Incorrect eye position, particularly one that's too low, can be a significant contributor to approach and landing accidents. The pilot who sits too low to get a good view of the runway tends to crane his neck as he transitions to visual references. This causes serious misjudgment of aircraft altitude and flight path, and can also bring on an increased sink rate on short final as the pilot releases control pressure to lean forward.

The most marked errors in aircraft and simulator tests were made by pilots who were transitioning to new aircraft or who had changed their usual seat position. Remember, we said that each pilot eventually finds a seat position that works—one that gives him both a good instrument scan and good outside reference for flare and landing. It works because it puts his pair of Mark I Depth Perception and Miscellaneous Ogling Devices right where the aircraft's designer intended them to be. (Incidentally, some designers think eye location is so important that they include mechanical or optical devices for eye positioning in their cockpit designs; the Boeing 707 is an example).

The point of all this is that once you've found the point of view that gives you consistently good landings, *don't change it.* Sure, it's tempting to drop the seat an inch to get a better look at the gauges when you're taking an instrument check or getting ready to make a CAT II approach in blowing murk. But each inch below the optimum position can reduce your visual angle by up to 3.5 degrees and your visible ground segment by as much as 15 percent at CAT II minimums, depending on your airplane. It's tough enough to get it on the ground in really low visibilities without the added handicap of cut-off vision.

Sitting too high isn't a good deal, either. Sure, you can see more of the runway, but you also see less of the gauges; and if you focus your attention too close to the nose of the aircraft, you lose the perspective you need for a good flare and touchdown.

Of course, there are factors besides seat adjustment that can give you eye position problems. Let's imagine a C-130 driver making an approach from the right seat, with a good stiff left crosswind. Size-wise, our hypothetical Herky pilot is considerably shorter than the average bear. Now let's assume that he's just gone visual, and that he's just decided that he needs a little extra power. So he's leaning to the left and forward to make the long reach for the throttles on the left side of the Herky's console, holding in a good chunk of left aileron and nearly dislocating his right leg to get in enough rudder. There's just no way our neo-contortionist could have his eyeballs where Lockheed meant them to be. Unfortunately, there's not much you can do about a situation like this except to be aware of it and use an extra measure of caution—or maybe give all the left crosswind approaches to the guy in the left seat.

The problem of correct eye location has really only been recognized in the last generation of aircraft, particularly high-performance jets. It's currently being looked at by safety types to determine whether some optical/mechanical method of eye location is desirable for aircraft such as the C-5 and C-141, so you may hear more about it in the future.

In the meantime, stick to your tried and true technique for keeping your eyeballs where they belong, and use it every time (remember that venerable aviation maxim: If It Works, Don't Mess With It). Sitting right is a good way to land right, and it only has one disadvantage—the next time you really crunch one on, you'll have to try blaming it on the wind.

Honorable Mention, 1976 MAC Flying Safety Writing Contest

The flying safety challenge appears in many forms. This time it's masked by rank and experience.

by Capt Michael E. Humphreys
9th Air Refueling Squadron
Beale AFB, California

What Do You Say to a Guy with 8,000 Hours?

Another night that's gonna be a long one . . . . " The phrase from the song runs through my head as I stare at the clock, gritty-eyed. Not quite two in the morning. I stumble out of bed and down the hall to the bathroom for a drink of water. Wearily, I sit down on the john and rub my hands across my temples.

It's been like this for a year now. Every time I'm scheduled for a night refueling mission, I turn into an insomniac. The actual night AR is three hours of agony, sweating and guarding the controls while the student flies, expecting every second to hear, "Breakaway! Breakaway! Breakaway!" And afterward, the sleeplessness and the mind endlessly circling back to that other night long ago. Even now, even in the security of my own house, I see the C-130 falling off on a wing and spiraling down to bloom into flame on the rocks below.

It's been exactly a year. A night like tonight—too much like tonight. Why can't I stop thinking about it?

The sound of running water in the sink beside me is almost hypnotic. My mind slides back along a well-worn groove of memory, back finally to the day of the Certification Board. I wish for the hundredth time that I'd had to fly instead, that I could have been somewhere else . . .

It was sort of a spontaneous affair, that Cert Board. Not really rushed or thrown together at the last minute, mind you. It was just that everyone happened to be available. Then, too, there was a little pressure on to get the colonel certified and flying, considering the shortage of C-130 IP's. So

Major French, the ops officer, convened a board. The squadron commander was TDY, and Major French was the acting commander. Joe Statt from DOV came around trying to get everybody together and, for once, we were all in the office. As the squadron safety officer, I always attended.

Colonel "Z" was being certified as an IP in the HC-130. He was a new lieutenant colonel, assigned to our wing and attached to the squadron for flying. Everyone called him "Colonel Z." It was much easier to say than his actual last name, an unpronounceable combination of consonants of Eastern European origin.

Major French went over Colonel Z's background and experience. He had held a rated supplement position before coming to a staff job in the wing. Most of his career had been spent outside MAC, but he was no stranger to the line. He had flown the Herk years ago before the C-141 became operational.

Two things struck me about Colonel Z's record. First, he had just a little over 8,000 hours of total time—most of it in C-130's. Eight thousand hours over a career that spanned almost two decades. And here he was, a "Million Miler," being certified by a board composed largely of young captains who were still in junior high school when this man was already an experienced pilot.

The second thing that stood out was that although he had never instructed in a formal school, he had been an IP/FE and had more than 2,500 hours of instructor time. That was a thousand hours of flying time more than I had acquired in my entire Air Force career. I felt just a little awed.

After reviewing his records, Major French went around the room and asked for any comments that anyone might have concerning his upgrade. Only one guy had anything to say. Art Lacon, head of HC-130 instructor training, was there and stated that he had been impressed by Colonel Z's upgrade to IP.

But then with 8,000 hours in the airplane, what would you expect? His stick and rudder was a little rusty initially, but his proficiency came back quickly. Art said he was convinced that Colonel Z would be a real asset to the wing. Most of us took that to be an understatement.

Now, our ops officer is pretty straight all the way around, especially in the areas of standardization and safety. His Cert Board comments usually consist of some serious talk about aircrew discipline and professionalism, unnecessary "pressing" to get the job done, etc. But this day he was a little relaxed. We joked a bit about how Colonel Z should report in—he outranked us all. In the end, we all stood for him as he came in.

The actual certification was over in a minute—it was, after all, merely a formality. Major French was only slightly apologetic about the board. He acknowledged the fact that Colonel Z had more time than all of us in the room together but that the board was a MAC necessity. To this, Colonel Z only smiled and nodded his head deferentially. It was true, as Major French said—Colonel Z had sat on many similar boards and probably conducted a few himself. At that point, the ops boss said the colonel could consider himself certified and went around the room asking each of us if we had any words of wisdom for the colonel. The guys from Training and DOV didn't have much to say. I was next, and several things went through my mind. I started to say that I was certain he was aware that since we are a CCTS, a large portion of our students in both helicopters and 130's are second lieutenants fresh out of pilot training. I started to say that many of the IP's here have, at one time or another, had a student do something completely unexpected in the cockpit. I started to tell about a simulator mission the week before during which I gave the two students an engine failure. They overreacted, shut down the wrong engine, and ended in an autorotation which would have killed everybody on the crew. I started to say that experience had shown that the best rule of thumb when flying with a new lieutenant is to consider yourself solo. I started to say that, but I didn't. Instead, I said, "Nothing to add, Sir. Welcome aboard."

Slowly I come back to reality. The soft rush of the running water into the basin quietly reassures me that I am back to the here and now; but I am still a captive of the there and then. I wonder if there was anything I could have said? Maybe just a word in casual conversation or during a safety meeting. What could I have said that might have made a difference? What *can* you say to a guy with 8,000 hours?

My mind begins to wander again. I start to think about that day—the day we lost the 130, or that night, rather; it was that night AR . . . .

It was drearily hot that afternoon. It was the kind of day that begins to wear on you long before it's over, like grit in a bearing. The mission was supposed to be a day/nighter, but it began to look as if it would be more night than day. First, my H-53 was broken with a hydraulic leak. Scrub the first half of the mission—a transition ride for a new student. The second half of the flight was a night AR. But the broken slingwing was academic; the tanker was parts plus three hours, and the 130 line truck driver doubted the part was on base.

My crew and I waited idly in the base ops snack bar. We ate to fill in time. It was standard snack bar fare—my flight engineer wondered aloud how much grease the human body could consume before it had a detrimental effect.

Halfway through our meal, the SOF came in to inform us that our aircraft was ready. We also learned that another King bird was inbound from an eight-hour student nav mission and would meet us on the AR route and that the DO wanted us airborne ASAP. The King crew barely had sufficient crew duty left to help us with the mission, and we *had* to get the night AR—the student was scheduled to graduate the next week.

The sun seemed to be struggling to remain above the horizon, but finally resigned itself to the inevitable and, with a last barrage of yellow light, settled down beyond the distant smog. It was hot. I was impatient to get airborne, to get some air circulating through the muggy cockpit. We finally got clearance, made our takeoff, checked power, and broke out of the traffic pattern to begin our climb. Approach told us we were clear of any conflicting traffic. We started up the "long, delirious burning blue."

At altitude it was still light. Up ahead, down in the canyons and behind the buttes, deep twilight became night. King 44 was on station calling for me. It was Colonel Z.

An hour and a quarter later, we were on the second rendezvous. We were at the north end of the track, where the terrain reaches up hungrily in jagged thrusts of tortured rock—just daring a pilot to descend too low on a black, misty night. King 44 was three miles in trail. Our checklists were complete, and we were waiting for Colonel Z and his student to come abreast and assume formation lead. Communications had been terse. I sensed in the clipped syllables of King 44 the boredom produced by the numbing fatigue of a long day.

The C-130 called abreast at three o'clock. My student in the right seat "rogered" their transmission, and King 44 became the formation lead. We slipped softly down toward the huge gray hulk lit only by touches of red, green, and white, to fly just off his left wing, in the "observation" position. I was thirsty for the last plug-in which would signal a completed mission and a final turn toward home. My student was a good stick. He was very steady as he engaged the basket with the probe for what I expected to be the last contact of the night. He was good. Nothing more needed to complete the mission. It was time to go home.

Suddenly the radio crackled with Colonel Z's voice. Gone were the fatigue, the boredom, the monotony. "King 44, breakaway, breakaway, breakaway." Trouble.

The student had already begun to drop back and to the left by the time I took control. We were clear of the 130 now and well above him. I could clearly see the loadmaster in the light of the open ramp and the flashing red Aldis lamp. What occurred next happened in a fragment of time, quicker than the telling. We halted our retreat, keeping the 130 in view, attempting to be of some assistance no matter how feeble. The silence was killing—deafening. I bit my tongue to keep from breaking the radio silence, knowing the 130 crew had their hands full and that they would let us know the nature of their emergency when they had it under control. He wasn't accelerating, I noticed. And it was then that we saw the big aircraft yaw, nose down, and roll off onto the right wing. There was no radio call. My FM, standing in the door, said he thought he saw the loadmaster jump out the ramp. It was only when we saw with horror the bursting flower of flame on the hill below that we realized the full extent of the tragedy.

We remained in the area for another two hours coordinating with the ops center. There were no survivors that we could locate at the crash site. There

was no word from the loadmaster. We found out later that he had exited without a radio. When another H-53 reached the area, we came home.

Nothing much was ever conclusively decided from the wreckage of the C-130. Much of it was scattered; what stayed together burned completely on a high, windswept, inaccessible rock shelf at the north end of the refueling track, mute testimony to the living and dying of seven human beings.

What we learned of the accident came primarily from the loadmaster who bailed out as the 130 started to go down. He had walked into a ranch at daybreak and called the command post from there.

The initial response to the add-on night AR, we learned, had been one of moans and groans. The crew would be pushing their crew duty day to the limit, and no one really wanted to do it. But the mission needed to be done, so Colonel Z and the student, a young second lieutenant, had swapped seats, putting Colonel Z on the left. The student FE retained his seat at the engineer's panel. The AR was uneventful until just after the second rendezvous was complete, when the loadmaster heard Colonel Z call out that the gearbox oil pressure had dropped to zero on number three engine. The colonel had not overreacted, but rather cooly called the "breakaway" and ordered the copilot to shut down number three engine. The loadmaster reported that he had then heard a great deal of scrambling, cursing, and confusion over the intercom in a very short space of time—and then heard Colonel Z shouting, "You've shut down the wrong one." A few seconds after this, the aircraft yawed right, dropped right wing low, and began a rapid descent. The loadmaster bailed out.

It was the conclusion of the board that the aircraft crashed due to the loss of both number three and four engines below the two-engine minimum control speed. How it happened is, of course, speculation. But the board postulated that when Colonel Z ordered the shutdown of number three, the student pilot reached up to the next-to-last handle and pulled it. The error was that the last handle was the gas turbine compressor handle and the one immediately to the left was the number four engine shutdown handle. That, of course, shut down number four instead of three. The scrambling over the intercom was possibly the instructor flight engineer trying to keep the student pilot from making the mistake. There was no way to prove that. At any rate, if he tried, he was unsuccessful. And that put them in a situation from which there was no way to recover within the 2,000 feet terrain clearance.

•

Like a distant, faraway noise I again hear the water running in the basin and slowly come back to the present. Once more I fill my glass and drink. The water is cold and good, but it doesn't take the fetid taste out of my mouth.

Once more I wonder if I could have said anything. I wonder if *anyone* could have said anything that might have made Colonel Z a little more cautious with the second lieutenant—that would have made him watch his student and possibly stop him before he pulled the wrong handle. But the IFE tried to do that, they said—or did he? Was he expecting Colonel Z to keep the student from pulling the wrong handle? We'll never know.

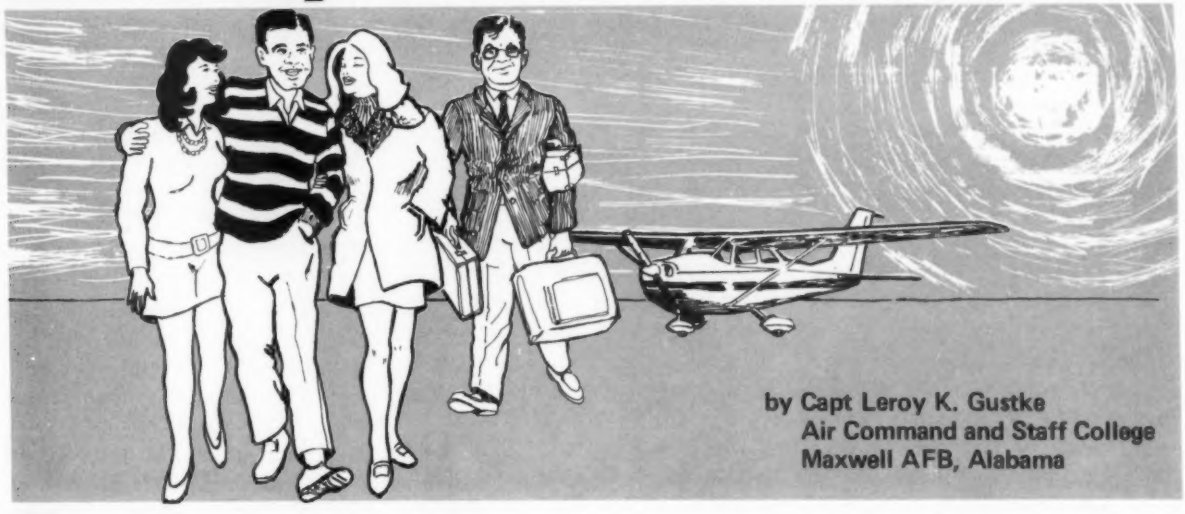
But maybe I could have said something. That's what bothers me. Maybe we could have said something in the Cert Board—either Training, DOV, or the C-130 instructor training monitor. The things I was going to say but didn't. Maybe I could have said something later, in passing, or in a safety meeting . . . possibly not . . . probably not. After all, *what do you say to a guy with 8,000 hours?*

ABOUT THE AUTHOR

Captain Humphreys, a native of Charleston, West Virginia, entered the Air Force in 1970 and completed helicopter training in 1971. After a tour in Thailand flying CH-53's, he was assigned to Hill AFB as an HH-53 instructor pilot. During his three years at Hill he contributed several articles to THE MAC FLYER, including the first-place winner of the 1974 contest, and was named MAC Junior Officer of the Year. Captain Humphreys is currently a KC-135 pilot with the 9th Air Refueling Squadron at Beale AFB, California.

An easy flight in a simple airplane, a super football weekend, and an admiring crowd—I had almost everything I needed to be a . . .

Sunday Afternoon Hero



by Capt Leroy K. Gustke
Air Command and Staff College
Maxwell AFB, Alabama

An old instructor pilot friend of mine had a favorite saying that he got a lot of mileage out of. He'd trot it out every time he read an accident report with "pilot error" written on it in large neon letters.

"Experience," he'd say, shaking his head sadly, "is *not* the best teacher. It's the *only* teacher." Naturally, I agreed. After all, the remark referred to all those dummies who screwed up and scattered airplanes all over the territory or who barely scraped through the experience intact. My friend was talking about guys who pressed weather, or flew sick airplanes, or insisted on trying to land out of bad approaches.

I didn't realize at the time that he was also talking about me.

Looking back now at my own big screw-up, I can determine the major cause. My takeoff decision was made three months prior to departure. I was certain that I would go even before I checked the airplane and before I checked the weather. I was *going*; that's all there was to it. The motivation behind my premature decision was significantly stronger than any I had experienced before. The pressure to launch was far greater than any DO or wing commander could ever exert on me. I was going to fly my wife and another couple to South Bend to watch my Alma Mater play football against Air Force.

The game wasn't that important, but we were going to spend the weekend at my sister-in-law's big, beautiful house (*sans* children) and attend the greatest parties since the Roman Empire fell. Months before the game we discussed the great time we were going to have. New clothes were bought, and each outfit was scheduled to make its appearance at a predetermined time. Every hour's activities were preplanned. This was my big chance to be a hero, the life of the party. "Yes, ma'am, we flew in for the weekend," I practiced my line.

The biggest hurdle now was the Aero Club. They had more rules, regulations, and restrictions than ATC and IRS combined. I had to reduce the possibility of these heartless ogres ruining our weekend. Even though I had well over 1,500 hours of multi-engine jet time and about a thousand hours of singe-engine prop time, a commercial pilot's license, an IFR rating and was actively flying, they made me go through the whole checkout program. I spent over fifty dollars getting checked out. I even got Aero Club instrument-qualified so bad weather couldn't stop us. I spent two hours under the

hood, pretending I was in weather. But since my almost thousand hours of light plane time were in ancient, VFR-only O-1's, I had yet to log one hour of real instrument time in a light aircraft.

As the countdown to launch neared zero, my weather fears proved unfounded. Friday was the best day we had seen all fall, not a cloud in sight and wind calm. A collegiate V-neck sweater was perfect for the 60-degree temperature. Nevertheless, I filed IFR for two reasons: first, the women were scared to death that another plane would run into us, and second, I had not really flown cross-country VFR (Vietnam doesn't count) since I was a student pilot nine years ago.

The flight was uneventful—just like the flying I'd been doing for years, only a little slower. I contacted center when told and went direct from VOR to VOR. Even though my passengers had taken a Librium, they were still quite apprehensive and required reassurance every few minutes. After some confusion as to which runway was which and where the 727 was that we were to follow, I greased it onto the runway as they cheered, clapped and patted me on the back. I parked and refueled the airplane, and the second part of this fun-filled weekend began.

Friday night, we ate, drank, partied and had a fantastic time, while a huge weather system moved in over the Midwest. We woke up Saturday to rain, drizzle and low clouds.

My wife frowned, "Could we fly in this weather?"

I assumed my best C.R. Terror jet pilot stance and said, "Maybe. I'd have to check the height of the clouds, icing, and so on. But don't worry your pretty little head; we're not going to fly today. Tomorrow will be clear."

We went to pre-game parties. We watched the brutes play in the muck and mire as it continued to rain all day. We went to post-game parties and I switched to Coke about nine o'clock. I never got too concerned about the weather; after all, I was IFR qualified. I had plenty of instrument time. Besides, I was the great and magnificent pilot who was responsible for this fantastic weekend and everybody seemed to be duly impressed.

The weather Sunday morning had not improved significantly as I had predicted. The women looked at the sky and said, "We can't go . . . "

"Now, let us not be too hasty," I interrupted. "Maybe we can climb on top and have a smooth flight home." We piled into my brother-in-law's van and headed for the airport.

"I know there's no way my hero would risk the lives of his friends and loved one," my wife smiled weakly, as the windshield wipers methodically pushed the now icy rain away. The others remained in the van as I went up to the FAA weather facility. They were certain we would return to the cozy fireplace and try it again tomorrow.

However, my own thoughts were quite different. I had to get back today. I had an important briefing scheduled and the prospect of trying to reschedule it because the action officer was "stuck out" on leave was unthinkable. I had no alternate plan to get back. I could always fly commercial if I could get a seat, but that was unlikely after a football weekend. And even if I could get a seat, I'd have to buy another commercial ticket to come back and get the airplane when the weather cleared. The cost of this weekend could cause me to float a loan.

The weatherman casually informed me that the weather was 800 broken with the tops at 6,000. There might or might not be some icing in the clouds. Our destination was IFR, but above minimums and forecast to improve by the time of our arrival.

Hell, I thought, that's a piece of cake. I'll just bust right up through the clouds and go VOR to VOR on top. Nothing too tough for the ol' pro.

"Come on, folks, let me show you a magic trick. We'll take off, and I'll take us right home without ever looking at the ground."

There were exclamations of surprise and admiration for the fearless aviator who dared to challenge the weather. I should have remembered right then that it's not nice to fool Mother Nature.

Soon after we took off, we were engulfed in the gray ugly clouds. I immediately went on instruments. I turned on the pitot heat, briefed the passengers to keep checking

for icing, and concentrated on keeping the ball in the middle, the wings level, and the airspeed at 80 knots. We were all nervous but okay and the air was awfully wet but smooth. Having never flown a light aircraft into a cloud, I didn't know where the ice would start to form. The passengers kept busy looking for ice but didn't see any. As we climbed through about 3,500 feet it became increasingly difficult to maintain any rate of climb, even though I had full power. The rpm might have fallen some, but I never really included it in my cross-check.

The shaking began so gradually that I didn't even notice it at first. We had almost levelled off and I couldn't seem to get any more altitude.

My wife finally broke the silence. "Please, let's go back. I don't like this.

Now the shaking had become worse, and both girls were getting panicky. I noticed that the rpm had definitely fallen. The fear that had seized the girls in the back now seemed to be spreading. I was damned scared .

The vibrations finally became so bad that I asked my friend in the right seat to try to hold the instrument panel steady so I could at least stay wings level. Something was drastically wrong with the airplane. If I couldn't figure out what it was, it was going to be worse than embarrassing; it was going to be all over. If I could just get on top and have a real horizon, I'd be in familiar surroundings and I'd be able to think straight.

"Let's go back, please." The girls weren't helping my nerves any.

"Alright, alright," I barked. I told departure control we were experiencing some difficulty and requested radar vectors back for landing. He, of course, asked the nature of our difficulties and if I'd like to declare an emergency. I explained and decided not to declare an emergency yet. The weather had deteriorated somewhat and now I'd have to bust a 500-foot ceiling. *Damn.*

As the controller issued me a heading and altitude, I read it back and would have declared an emergency in the same sentence, but something happened. As I began to turn to my new heading and pull off power to descend, I pulled on the carburetor heat and the shaking stopped. The engine spit, sputtered, and began to run smoothly.

Eureka! Shazam! Carburetor heat! Why hadn't I thought of it? I never thought of it because I had never flown a piston-engine airplane into a cloud. I never thought of it because the only time I had ever pulled it on was when I was descending. Nobody ever told me to apply carb heat in *weather.* How dumb can you be?

I swallowed my pride and called departure control again, explained my error with a few coughs and ahems, and asked for my clearance back to home base.

•

When I look back on that weekend, I realize that the least important thing I learned was how to use the carburetor heat; the really vital lessons were the ones I learned about myself. I had let my personal desires push me into making questionable decisions. I had risked the lives of my wife and friends as well as my own through overconfidence and a surplus of ego. And I had treated an aircraft as though it were a toy and a difficult flight as a "piece of cake." I had forgotten that flying in any aircraft is a task which requires full concentration, attention, and respect.

I'll remember all those things the next time I make a "fun" flight. Of course, that may not be for awhile.

My wife has decided that this year we'll watch the game on TV.

ABOUT THE AUTHOR

Captain Gustke began his Air Force career in 1967 as an ROTC graduate of Notre Dame. Following pilot training, he was assigned to Southeast Asia as a forward air controller in the O-1E. During his tour he accumulated several decorations, including a pair of Silver Stars. From 1970 to 1973 Captain Gustke flew C-141's at Norton AFB, California, upgrading to instructor pilot. He was then assigned to MAC headquarters as an air operations staff officer. Captain Gustke is currently attending Air Command and Staff College en route to an assignment at Charleston AFB, South Carolina.

Fighters with Feathers

Well, it's that time of year again. They're taking off in squadrons, forming into numbered air forces, and setting their sights on the MAC airlift fleet. They'll take plenty of casualties before the battle's over, but they'll inflict some, too. And no matter how heavy their losses are, they'll be back again in the spring.

Our feathered adversaries did pretty well last year, damaging a total of 43 MAC aircraft. (They had even better success against the civil fleet; last November, a squadron of migratory gulls totally destroyed a DC-10 on takeoff roll.) The C-130 was the favorite target of the B-1-RD during 1975 with a total of 19 strikes; the Starlifter came in second with 17.

Engines were damaged more than any other part of the airframe last year (ever hear of a heat-seeking mallard?), with leading edges and radomes the runners-up. Eight reported strikes resulted in no aircraft damage, including one in which a C-5 engine gobbled up a pair of storks. The engine was unharmed; the storks weren't so lucky. As far as can be determined, all the 1975 strikes resulted in major damage to the feathered participant.

Remember that they can turn a lot tighter than we can and prefer the head-on attack; you probably don't have to worry about "checking your six" unless you're driving a C-7 or a Huey. Watch out for the really big formations—this is their favorite technique for concentrating their relatively limited firepower.

Incidentally, no attacks were reported during January and February of 1975—possibly a maintenance standdown or a severe worm shortage. But don't count on that kind of break again; they may just have been sharpening up their cold-weather procedures.

Anyway, they're out there, just waiting to roll in from out of the sun. So keep your eyes outside—and be ready to duck.

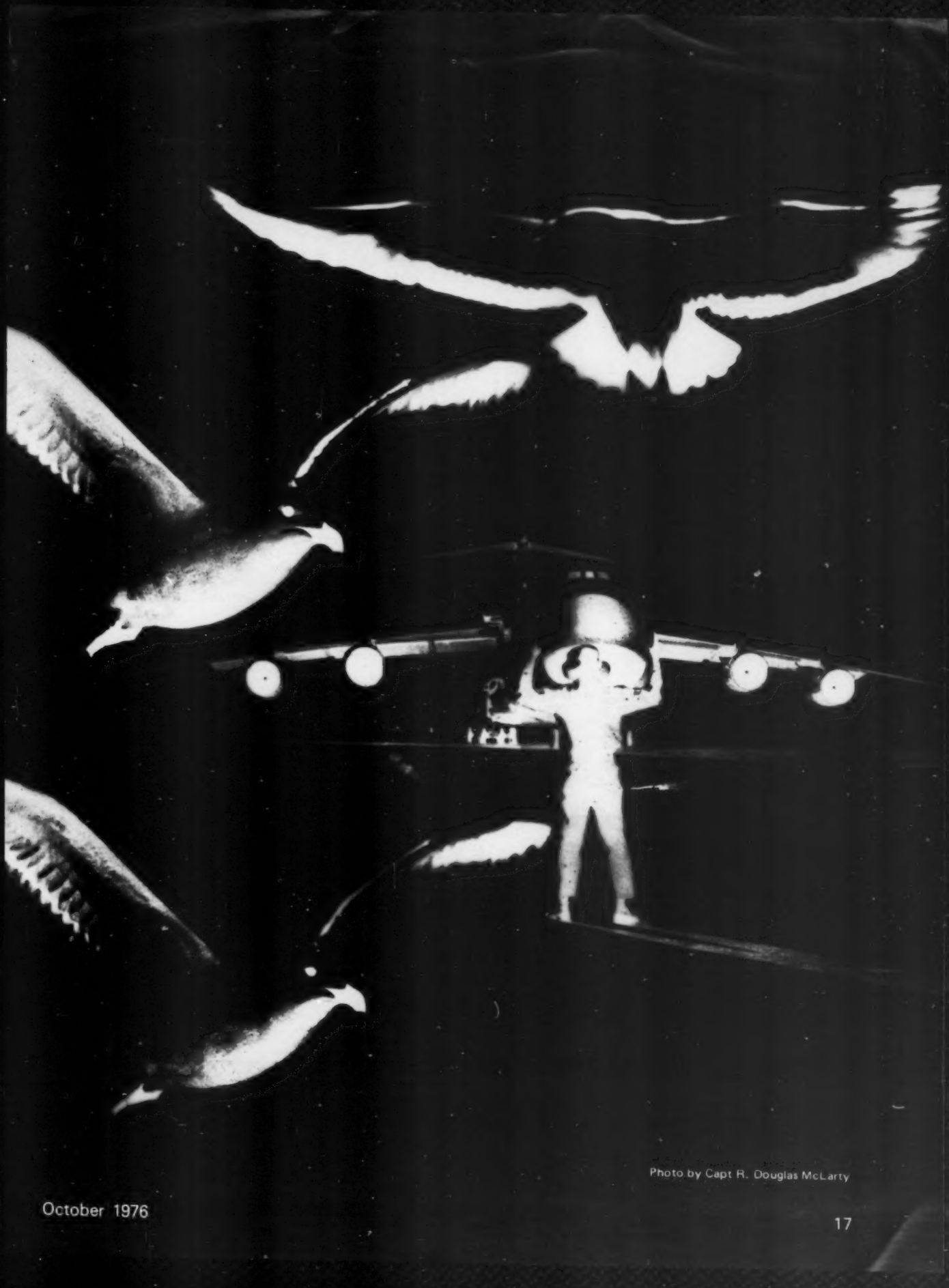


Photo by Capt R. Douglas McLarty

High Fright

Yes, Ma'am, I fly jets," the MAC pilot said (a four-pointed star flashed from an upper lateral incisor as he grinned broadly).

"Golly," she marvelled, "where do you get all that courage? I could never do anything like that."

"Shucks, Ma'am," he beamed. "It ain't nothing. Matter of fact, it's kinda fun."

True. It is "kinda fun." At least for those of us who have been doing it for years. But flying is an esoteric business—not everybody enjoys the ecstacy of slipping the surly bonds. Some of our riders find flying downright uncomfortable; others describe their emotions as more closely resembling stark terror.

Ever wonder why your Aunt Minerva thinks you're crazy to fly airplanes? Try looking at it her way for a change.

Because we frequently have occupants aboard who aren't MAC crewmembers and because aviators tend to feel that everybody on board has a confidence level matching theirs, we have assembled some short notes, anecdotes, stories, et cetera, designed to dispel the rumor that "flying is *always* fun" and help pilots, navigators, engineers, and loadmasters look at flying from the passenger's seat.

Isadora Wing's fear of flying:

There were 117 psychoanalysts on the Pan Am flight to Vienna and I'd been treated by at least six of them. And married to a seventh. God knows it was a tribute either to the shrinks' ineptitude or my own glorious unanalyzability that I was now, if anything, more scared of flying than when I began my analytic adventures some thirteen years earlier.

My husband grabbed my hand therapeutically at the moment of takeoff.

"Christ—it's like ice," he said. He ought to know the symptoms by now since he's held my hand on lots of other flights. My fingers and toes turn to ice, my stomach leaps upward into my rib cage, the temperature in the tip of my nose drops to the same level as the temperature in my fingers . . . and for one screaming minute my heart and the engines correspond as we attempt to prove again that the laws of aerodynamics are not the flimsy superstitions which, in my heart of hearts, I *know* they are. Never mind the diabolical explanations of air-foil you get in Pan Am's multilingual INFORMATION FOR PASSENGERS, I happen to be convinced that only my own concentration . . . keeps this bird aloft. I congratulate myself on every successful takeoff, but not too enthusiastically because it's also part of my personal religion that the minute you grow overconfident and really *relax* about the flight, the plane crashes instantly. Constant vigilance, that's my motto . . . OK, I tell myself, we seem to be off the ground and into the clouds but the danger isn't past. This is, in fact, the most perilous patch of air. Right here over Jamaica Bay where the plane banks and the "No Smoking" sign goes off. This may well be where we go screaming down in thousands of flaming pieces. So I keep concentrating very hard, helping the pilot (a reassuringly midwestern voice named Donnelly) fly the 250-passenger mother . . . Thank God for his crew cut and middle-America diction. New Yorker that I am, I would never trust a pilot with a New York accent.

—From *FEAR OF FLYING* by Erica Jong. Copyright © 1973 by Erica Mann Jong. Reprinted by permission of Holt, Rinehart and Winston, Publishers.

Bob Green in the New York Daily News:

This is a plea to all commercial airplane pilots: Shut up.

I mention this because it has happened once again. I was strapped into an airplane seat, flying at 600 miles per hour in a massive 707 jet, when it happened again.

I must preface this by telling you that flying frightens me. Because of the nature of my work, I fly a great deal; during the 1972 presidential campaign, there were days when our jet made a dozen separate takeoffs and landings. I have learned to hide my terror.

Now, back to what happened. I was cringing in my seat, grinding my teeth down to the root canals, when this voice that was a combination of Will Rogers and Dandy Don Meredith came blasting out of the loudspeaker.

"Wellllll," came the twang, "ah jest thought ah'd tell y'all that we jest passed the wee-jee board around up here in the cabin, and we're gonna have to revise our landing

time. Yep."

This was my captain speaking. I know that it was my captain speaking, because he had identified himself as such.

Now you must understand that for those of us who do not like to fly, but are forced to do so, pilots are a very special breed. We like their perfectly tailored uniforms, their neatly barbered haircuts, their gleamingly shined shoes. We like these things because it gives us confidence.

Pilots and brain surgeons seem to be the only breed of Americans remaining who have not given in to the cult of personality.

Which is fine. If I were to go into a dentist's office and find the man wearing blue jeans or a scraggly beard, it would bother me not at all. With a pilot, I would not get on the plane.

Placing trust in a physical image may be irrational, but so be it. I want my pilot to look like Barry Goldwater, not Gregg Allman.

But more and more pilots have begun to reject their steady, firm-jawed, rock-silent attitudes and have decided to become in-flight entertainers.

They have decided to do their own things, and the things, apparently, usually consist of a nonstop monologue during flights, in which they attempt to let us know they are not computer-nerved automatons, but have personalities and senses of humor and quirks just like you and I.

I'd rather not know. Give me an automaton any time.

So . . .

"Does any of yew know where we are?" my captain said, and laughed. He paused for about ten seconds. "Bet yew don't, do yew? Can't see through them clouds, can yew?"

A stewardess whispered: "He's never like this on the ground. He's a very quiet man with hardly any accent at all. I guess the airplane just brings out the ham in him."

"Why, lookee there," my captain said. "There's the O'Hare Aerodrome, right down there. Yep. We're all gonna head on down toward the aerodrome, and ah'm gonna be a nasty ole hand and make you snuggle up inside your seatbelts and cut out your smokin."

"Hang on, everybody," my captain said, "or at least hang on to what you've got, 'cause here we go!"

And so the flight was over. But there are thousands more every day, with two or three potential superstars in every cockpit.

By 1976 we can look forward to the sight of America's pilots sauntering down the aisle after the landing, stripping off their caps and flight jackets and tossing the garments to the passengers, just like Cher on her way toward camera.

—Reprint from *Flight Ops,* Pan Am, Jan-Feb 1976.

"Introducing the star of our show—

H-e-e-e-r-r-e-e's your captain!"

We were taxiing out for takeoff at Denver when he opened up on the P.A.

"Springtime in the Rockies, ladies and gentlemen. Sixty-five warm degrees outside on this beautiful evening, a perfect night for flying. We'll be aloft in just a matter of seconds now, so please recheck your seat belts. Here we go!"

The wheel-well doors slammed shut and he was back.

"There she is, ladies and gentlemen, the 'Queen City of the Plains,' Denver, Colorado, spread out in all its glistening glory. And just beyond, the majestic front range of the Rockies rising up to meet the myriad colors of twilight in the western sky. Good evening, everyone. This is Captain Ham Akter welcoming you to the cordial clouds of Convivial Airlines. As we make our left turn out, we'll be rewarded with a marvelous view of the 'Mile-High City,' its lights twinkling like diamonds in the clear mountain air. And we'll be flying directly into that glorious sunset on our way to Los Angeles, out over the Continental Divide in the high country of 'Colorful Colorado.' " Having either run out of cliches temporarily or been forced to attend to the airplane, he paused, giving us passengers time to admire the view, his mellow tones, and his stag-

gering string of superlatives.

The preceding episode actually happened. Only the names have been changed to protect the guilty. It is a first-rate example of one of the extremes encountered while riding in the back of the bus. At the other extreme we have something like this:

"Good morning. We've reached our assigned cruising altitude of 33,000 feet and turned the seat belt sign off, but we ask you to keep your belts fastened while in your seats. The St. Louis weather is three hundred obscuration, one mile in snow. The temperature is 27. We thank you for flying Dairy Air and hope to see you again." The slightly strangled sounding voice chokes to a stop and the P.A. clicks off. One can picture the shaken fellow wipe the sweat off his brow and breathe a sigh of relief.

Somewhere in between those two is the dialectician who affects a sort of semi-southern rural accent. He apparently wants to come across as just a real good ol' boy who ain't too impressed with the big squadron of bolts he has strapped to his butt or with all the fuss people make over it. Heck, it's just another airplane.

There is only one reason for citing these examples. That is to try to arouse a little more interest among pilots in the quality and content of the cockpit P.A. announcement. That interest has already been aroused elsewhere in the populace. Where is the comedian who doesn't have a routine based on pilot P.A.'s? Or if not a routine, then a bunch of one-liners. What newspaper columnist has not expressed in print his disapproval of long-winded cockpit travelogues disturbing his concentration or sleep? On the other hand, thousands and thousands of infrequent passengers are delighted when told "that is the Mississippi River down there" or "Pittsburgh is visible off to our right." They may not know an "obscuration" from an "aileron," but they'd surely like to know what the *weather* is like.

O.K. So, which way do we go? Do we play it up or play it down?

Obviously, we don't do either. We try to please as many as possible and irritate as few as possible. You can't please all the people all the time, but you should be able to disseminate a little information without alienating too many.

Listen to other pilot P.A.'s when you travel. Profit by their good, or bad, example. Unless you are an accomplished extemporaneous speaker, give a little thought to what you are going to say before you say it. If necessary, make notes. Then try to sound as *relaxed* and *friendly* as you can while making a suitably brief *conversational* announcement. Speak a little bit slower than usual, and a little bit louder. Since you're going to all this trouble, it would be a shame if the passengers didn't hear or understand you.

—NCA *"The Ungarbled Word"*
Mar/Apr 1976

Editor's comments:

"I'd do it, even if they didn't pay me," the old eight-striper offered. He was talking about flying.

I believed him. God! he had over 22,000 hours of flying time—he had to love it.

And as I think about the old Chief's words, I remember another conversation—between my AC and me—deadheading from Dover to Charleston.

"I sure don't like to ride in back," he said.

"Me neither," said I. "I know that navigator is going to fly us through a thunderstorm."

"I'm just not comfortable when I can't see what's going on," the AC fidgets.

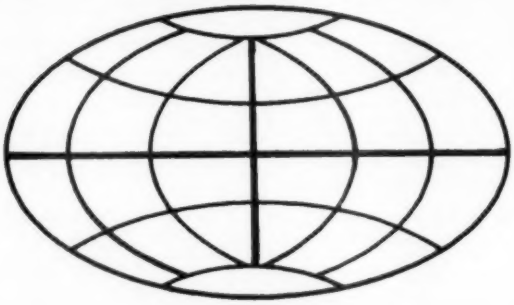
"Same here," I said.

Maybe that day we got a little closer to the feelings experienced by the Isadora Wings, the Bob Greens, and other disenchanted passengers. One thing is clear, the worriers outnumber us (over)-confident aviators by a wide margin.

So if you have passengers on board, pretend they are just a bit frightened—they probably are.

O.L. Brownfield

Global Notes



TSgt Gary B. Giles

Named Number One

TSgt Gary B. Giles, 512 MAW (Assoc), Dover AFB, Del., was named the Air Force Reserve Crew Chief of the Year for 1975. As a prime crew chief for the C-5A, Sergeant Giles earned the award on the basis of his aircraft's departure reliability, number of maintenance discrepancies, appearance, and flying hours. His aircraft is recognized as the best, most flight-ready aircraft in the C-5 fleet. It was selected to fly last year's historic first midair deployment of an intercontinental ballistic missile.

Nuke Safety

Congratulations to the 6 MAS, McGuire AFB, N.J., on receiving the USAF Nuclear Safety Certificate, awarded for outstanding achievement in 1975. The 6th flew 475 nuclear weapons sorties without an accident or incident.

The USAF Nuclear Safety Certificate is an annual award. During 1975 it was received by only seven units, Air Force wide.

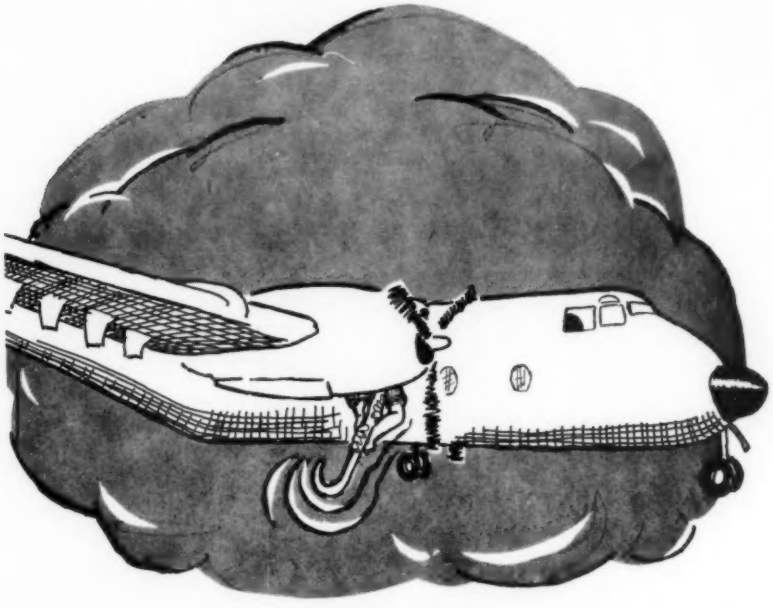
15,000 Hours

Six aircrewmen have been awarded 15,000-hour patches for accident-free flying. Together with the patches, these leaders in safe performance received letters from General Carlton congratulating them on their achievements.

Joining the one percent of MAC aircrewmembers who have attained 15,000 hours are SMSgt Robert C. Blair, 21 TAS, Clark AB, P. I.; MSgt Arthur L. Brown, 14 MAS, Norton AFB, Calif.; MSgt Armand G. Cala, 150 TAS (ANG), McGuire AFB, Calif.; CMSgt Joe K. Jackson, 21 TAS, Clark AB, P.I.; and MSgt Charles M. Masterson, 14 MAS, Norton AFB, Calif.

A Little Imagination

After completing a C-7A tactical training bundle drop, Capt Dennis M. Jorgensen and his crew, 700 TAS (AFRES), Dobbins AFB, Ga., entered the traffic pattern for a short field landing. After the landing gear lever was placed down, the right main gear indicated unsafe. Maj Samuel M. Brown, TSgt Louis E. Boos, and SSgt Terry L. Beaver confirmed that the right main gear was stuck in the wheel well. The crew spent two hours trying all flight manual procedures and suggestions from technical representatives at deHavilland, Kelly AFB, Warner Robins AFB, and Dobbins AFB. When all attempts were unsuccessful, the three crewmen improvised a gaff, using parachute hanging hooks and a seat rigging rod. By removing the cabin window nearest to the gear well, the crewmembers could reach the gear door with their contrived hook assembly. Another hour was spent pulling on the gear door with the rod and replacing hooks as they bent under pressure. Finally, the right main gear door opened and the gear dropped to the locked position. The performances of Capt Jorgensen and his crew earned for them the MAC Distinguished Individual Safety Award.



Nose Wheel Veer

1st Lt Norman P. Everhart and 1st Lt Douglas H. Lloyd, 4 MAS, McChord AFB, Wash., brought their C-141 in for an approach and landing at Cubi Point NAS, Philippines. But as the nose gear contacted the runway, the aircraft began to veer left. Lieutenant Everhart, the pilot-in-command, applied maximum right braking and differential reverse thrust in an effort to regain directional control, but at approximately 100 knots these applications became ineffective. Copilot Lloyd took control of the yoke and throttles while Lieutenant Everhart used both hands on the nose gear steering, attempting to keep the aircraft on the runway. As speed decreased, the aircraft turned ever more sharply toward the left side of the runway and Lieutenant Everhart realized no amount of control input would stop the turn. At approximately 75 knots, full maximum braking was applied and the aircraft stopped five feet from the left edge with 2,500 feet of runway remaining.

Materiel failure had caused the nose gear to cock left approximately 30 degrees upon extension. The checklist has since been changed to keep such a malfunction from taking another crew by surprise. For their skill in handling the unexpected during a critical stage of flight, Lieutenants Everhart and Lloyd received the MAC Distinguished Individual Safety Award.

I dunno, Boss," Blinky said in obvious agony, "I may be coming down with the swine flu—"

"Tut, tut, my Masterful Magellan," the Bold One reassured, "not a Poppa India Golf in sight. You've just got a case of a 24-minute virus known as the Kadena Krud. You'll be better when we're airborne."

"But, Boss," Blinky insisted, "I've got the same symptoms that Sammy had and the flight doc put him DNIF for two days."

"Right, Blinky, m'lad," C. R. confided, "and you know how much trouble I had locating a replacement copilot. Now if I lose you, that'll put us another two days behind schedule." Tassels would never understand, C. R. thought.

"Besides, Blinky, the cure lies at the end of this leg," the Ersatz Doctor of Aerospace Medicine diagnosed. "Twenty-four hours on the beach at Waikiki will bring your color back."

"But such a long leg, Sir—"

"So that's what's bothering you, m'boy," the Aviator with Avoirdupois allowed. "You needn't worry—if it's rest you need, we'll take care of that en route. Once we're airborne simply point me toward the island paradise, put your magic numbers in the computers, and I'll latch the autopilot to the autonavigator, whilst you get some en route crew rest."

C. R. guided Blinky through the door to base ops. "I'll even let you have the top bunk, the one normally reserved for aircraft commanders. How can you pass up a deal like that?"

"Okay, Sir," Blinky acquiesced, knowing the Obstinate One had made up his mind. "Maybe I can make it."

"That's a good soldier, my navigator of note," C. R. grinned. "Now smile for the nice man in the cage."

•

"Hey, Skipper," Blinky moaned, "the ASN-24 is written up as totally inop!"

"Steady, my ailing aeronaut," C. R. soothed. "Now just what does that mean? You still have another computer to perform your mysterious feats of Magellanism, right?"

The Addled Aeronaut tries his hand at the navigator's position and gets himself in a real fix.

"Yes, Sir." Blinky wiped some beads of perspiration from his feverish brow. "The ASN-35 is okay, but now I'll have to do a manual pre-comp for all my celestial—I'm not sure I'm up to that. Can't we get a maintenance type out here to look at it?"

"Hark, Blinky! Delay time approacheth with great rapidity," the Petulant Pilot pontificated. "I'll just waive the celestial requirements for this leg."

"Ah, right, Boss," the nervous navigator shrugged. "I just hope . . . . " Blinky's words were lost as the whining APU began spinning up.

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The Great One listened as his copilot transmitted the first AIREP. Satisfied that his right-seater could read and chew gum at the same time, C. R. slid his seat back.

"Lieutenant," the Portly Pillar of Pilotdom announced, "seems as though you have everything under control. You've got it while I check out the cargo compartment, make a comfort stop, and fetch me a cup of Kadena's famous coffee."

The lieutenant barely looked up from his Spider-man comic and nodded slightly.

C. R. stood and stretched to his full five-foot-five maximum altitude, inserted an Egyptian Oval into his favorite ebony cigarette holder, and flicked his jade-eyed Thai Tiger lighter. It was then that he noticed Blinky.

Seated dutifully at the navigator's station, Blinky looked as though he was ready for an assignment to Antarctica, bundled up in winter flying jacket, gloves, and cap. He sat with his arms folded tightly and seemed to be shivering.

"Hey, my young defender of democracy," the Able Aeronaut articulated, "you're looking somewhat comatose. Anything old Doctor Terror can do?"

"I really feel terrible," Blinky confessed. "I'm cold, I've got chills, and my stomach is doing split-S's. Maybe we ought to go back—"

"Nonsense, Blinky," C. R. insisted. "Let's see if the Terrorific Traveling Pharmaceutical and Apothecary Agency has something for what ails you."

With that, the Aviator with Avoirdupois retreived his custom-made wombat-hide flight bag from beside the left seat and removed a little-used Dash One, current issues of *Playboy, Oui,* and *Hustler*, three cans of authentic East Indian curry, a 35mm single lens reflex with an assortment of lenses, and a gold-plated corkscrew.

"Here we go, Blinky," the Teaser of T-Tails and T-Handles said with a twinkling eye. "I've got everything from no-sweat pills to 'the pill.' Now what'll it be? Lomotil? APC? Paregoric? Maybe you need a good dose of liquid cement?"

"No, I'd better not, Boss," Blinky chattered. "You know what the flight surgeon says about self-medication—"

"Balderdash! Look at me, Blinky," the Persistent Pilot prodded, "—living proof of the maxim, 'It's my body, I know what's best for it.' "

Blinky glanced at his Bulgy Boss. "Uh, right, Skipper—but I really think that if I could just get into the sack and get warm for a while, I could get my second wind."

"Why, certainly, my celestial son," C. R. comforted. "And you needn't worry about the navigation department. It's in my bloodline—I had a great uncle who was a navigator on the Titanic."

"Some confidence builder," Blinky muttered.

"What's that, m'boy?" C. R. inquired as he headed for the coffee jug.

"Er, nothing, Sir."

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When C. R. returned to the flight deck he was surprised to find his navigator still at his

station, leaning over maps, forms, plotters, dividers, and computers.

"Blinky, I thought I told you to hit the sack."

"Yes, Sir, I'm just tidying up the paperwork and programming the ASN-35 for the next two legs." Blinky extracted a handkerchief from his flight jacket pocket and blew his nose. "I'll brief you on the next couple hours of flight—maybe then I'll be in good enough shape to take it the rest of the way."

"Not necessary, m'boy." C.R. made an airy gesture of dismissal.

"Sir, I'd feel a lot better if you'd let me—"

"All right, my good Galileo," the Sterling Slipper of the Surly Bonds submitted, "anything to make you feel better."

With both pilots in their respective seats, Blinky began his briefing on hot mike. "Here's the 'How-goes-it'. We're four minutes behind flight plan, but the fuel looks okay." Blinky handed the green sheet to the copilot. "And here's the AIREP; you can fill in the blanks when we reach 170 East. Be sure and request a climb. And here's the flight plan. Like I said, we're four minutes behind but right on course. The ASN-35's set up all the way to the 180th—that'll be about two hours—so you can fly the computer. Just check the aircraft heading against the flight plan. It's generally 095 degrees—and if it isn't within ten degrees, get me up. Any questions?"

"You do good work, m'boy," C. R. confessed, "but totally unnecessary. Now you get into that bunk and don't fret over the small stuff. Our Stalwart Starlifter will streak straightaway for the sun and surf of ol' Hicktown."

Blinky smiled weakly, climbed into the top bunk, rolled himself into several wool blankets, and wished that Sammy were on board just to keep an eye on things.

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As Blinky drifted off into an uncomfortable never-never land, the Happy Hyperbolator took advantage of the fact that he had new ears on board—a pair that had never heard his tales of derring-do.

"Yes, Lieutenant, those were the good ol' days, when pilots were allowed to be pilots—unhampered by sissy regulations and an adversary ACP. We flew by the seats of our pants—kick the tires, light the fires, and don't get your scarf caught in the rudder."

The lieutenant nodded, nearly dozing.

"Why, I once flew the Big Shakey from Clark all the way to Hickam—a 23-hour flight. Old Shakey would carry a full day's fuel—24 plus zero zero. No, they don't make 'em like they used to."

C. R. extracted another Egyptian Oval from his engraved gold cigarette case and inserted it into the ebony holder.

"As a matter of fact, 'twas a day similar in every way to today. About the time everyone was digesting his third in-flight lunch, a couple of the crewmembers began to come down with severe gastrointestinal collywobbles. Before you could spell ptomaine, I was the only functioning member on the crew. Fortunately, I had ordered the boiled apteryx with avocado dressing—it's the continental taste I inherited from my world-traveling father. Anyhow, everyone else had the usual ham, turkey, and chicken—things I never eat. Not for religious reasons, mind you—I just know what's good for the old bod."

The right-seater's head was now bobbing freely as the young copilot, too, drifted into never-never land. The Old Bold Soul didn't notice.

"So, I found myself in charge of a one-man crew—myself. I became pilot, copilot, navigator, engineer, loadmaster, and even flight nurse for my ailing aviators. I shot celestial, called in the AIREP's, ran the panel, flew the bird, made hot broth for my patients, and . . . . " So it went for the next hour or so.

•

Back in the crew bunk, Blinky began to stir. He squinted, rubbed his eyes, and surveyed the cockpit from his vantage point high above the flight deck. The sun's up now, he thought; I must've slept for a couple of hours.

Then he noticed that the sun was shining very brightly on his Bulgy Boss, but not on the copilot. Could it be that he was

confused—that they were on an Australia trip? Why would the sun be in the northern sky?

Blinky alighted from the bunk and glanced at the number one compass: 175 degrees. He quickly checked the number two C-12: 175 degrees also.

In a matter of seconds, Blinky was between the two pilots. "Sir! How long have we been on this heading?!"

"Heading, m'boy? What heading?" C. R. blustered, a bit upset that Blinky had interrupted one of his favorite stories. "Talk to your mechanical friend back there; he's pointing the airplane." C. R. turned to his copilot. "A miracle of modern aviation, these computers. Just look how fresh our navigator is now that he's had some sleep."

"But, Sir," Blinky pleaded, "I said if the heading was more than ten degrees off flight plan heading to wake me. Our heading should be 092 now."

"Oh, er, ah, right." Beads of perspiration began to form on the Fearless Leader's forehead. "I'll just turn back to 092 then."

"Better make that, ah, 070, until I can fix our position," Blinky importuned. "It looks like the ASN-35 went haywire—the cross track reads zero and it's just clicking away."

"Ah, roger," C. R. coughed and rolled the big Starlifter into a 40-degree left bank.

Five minutes passed, then Blinky spoke. "Sir, I've got a shaky loran-sunline fix that shows us more than 400 miles south of course. Better make that heading 045."

"I'm in your hands, Blinky," the Portly Pilot feigned confidence. "Just lead us to Hawaii and I'll see that you're suitably rewarded with a Tahiti Gritty Mai Tai."

"I don't know about that, Major Terror. We should have climbed at 170 East," Blinky noted. "What happened?"

"Er, ah, conflicting traffic. Yeah, that's what it was, conflicting traffic."

"Well, let me run a quick check," the navigator said. "I kind of doubt if we can make it now."

Blinky's suspicions were confirmed a few minutes later. "Well, Sir, we can land about a half hour short of Honolulu or divert due north to Midway," he announced. "I've got a pretty good bearing from NQM now."

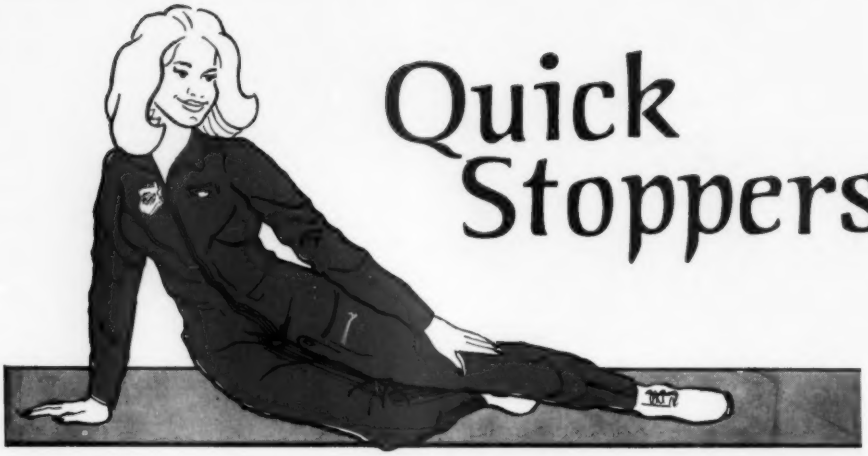
"Good enough, Blinky," C. R. sighed. "Give me an ETA for PMDY and I'll just home in on the beacon. Lieutenant, give Hickam a call and tell them we're diverting to Midway."

•

"Oh, Mister Terror," the seaman beckoned. "I've got Twenty-Second Air Force Command Post on the line and they'd like to talk to you, Sir."

"Terror, here," C. R. said in his best command voice.

"Uh, the reason for diversion? Oh, that. Well, you see, my navigator was deathly ill; I had diagnosed acute appendicitis and I thought . . . . "



Quick Stoppers

Surprise Package

The loadmaster noticed a peculiar odor around one of the pallets during his in-flight cargo inspection shortly after takeoff. The manifest indicated that no toxic or flammable substances were on board, and radio contact with the departure station confirmed the nature of the load. The crew selected maximum airflow, placed their sole passenger on oxygen as a precaution, and continued to destination, only a short distance away.

After landing, the crew opened the 70-cubic-foot container on the suspect pallet. They found, among other things, that it contained lacquer thinner, enamel, sulfuric acid, silver nitrate, sodium hydroxide, and formaldehyde. The thinner container was leaking.

The contents of the pallet, as listed on the manifest? —general office supplies.

Instant Replay

A little more than halfway through their evening local proficiency flight, the C-130 crew heard a beeper and noticed that the CPI deploy light was on. They reported the incident to GCA and provided bearings on the signal; shortly afterward, the CPI was recovered. Maintenance could find no defects in the system, so the CPI was reinstalled.

A week later, the same aircraft was flying the same type of mission at the same base and at about the same time of day. You guessed it—the same CPI deployed again. This time, investigators found damage to the wingtip frangible switch; the damage had been caused by a wing anti-ice overheat on an earlier mission.

The CPI and its airplane have been reunited, with hopes that future separations can be avoided.

Oh, Say, Can You See . . .

Most of us are pretty conscientious about watching for VFR traffic while we're on an IFR flight plan in clear weather. But once we get into some nice, murky clouds, we assume there's one less thing to worry about. Unfortunately, that seems to be a bad assumption.

A C-130 crew had just taken off on a local training mission and were in the clouds at 1,500 feet, under radar control. Without warning, a small floatplane which appeared to be a Cessna 172 passed less than 200 feet below the Herky on a nearly reciprocal heading. The controlling agency had no traffic in that area, and no identification of the light aircraft could be made; he had apparently not filed a flight plan.

But the real kicker was the weather in the area at the time of the near-midair. The current observation was 400 feet obscured, visibility two miles in fog!

Starlifter Oil Shortage

The C-141 was en route to an island base when the number two low oil quantity light illuminated. Half an hour later, the oil temperature rose slightly, and then the oil pressure began to fluctuate between 20 and 40 psi. The crew shut down the engine and started back toward their departure station.

An hour later, the number four low oil quantity light came on, followed eventually by oil pressure fluctuation between 15 and 40 psi. The crew then caged number four and, just before landing, restarted number two and left it at idle power. Two-engine procedures were used for an uneventful landing.

After shutdown, the number two engine was serviced with ten quarts of oil; number four required 16 quarts. Failure of the air oil cooler was the culprit in both cases.

Gremlins in the Cockpit

Shortly after touchdown on a touch and go, the left seater seemed to be having difficulty lowering the nose to the runway. The Starlifter instructor pilot noticed the pitch trim was nearly ten degrees nose up—normal trim for training missions in the C-141 is four degrees nose up. The IP used the electro-hydraulic trim switches to reset the trim for takeoff. But the indicator moved so slowly that he decided to use the manual hydraulic pitch trim lever. He moved the lever forward one-half inch and it stuck with no trim movement. Force was applied and the lever released. The hydraulic trim worked normally after this action and the aircraft was full stopped. The pilots reported that they had not touched the trim switches during the landing, and neither had noticed the trim indicator moving during the flare or landing. Watch for those gremlins.

QS

Faulty Fix

The C-123 crew had completed several touch-and-go landings when the flight mechanic noticed that the left main gear door was flapping in the airstream. In order to keep the door from rubbing the tires or dragging on the ground during landing, the crew donned restraining harnesses, opened the left troop door, and propped the loose end of the door up with a reinforcing rod, which was then lashed to the floor. Landing at home station was uneventful.

Investigators found that the failed gear door fitting had been previously identified as unsatisfactory and that a new fitting had been manufactured to cure the problem. The fitting in this incident was of the new design, but it had failed at exactly the same point as the previous type.

Maybe we have a new corollary to Murphy's Law: Anything that can go wrong once will go wrong again.

Not So Alert

The alert crew had preflighted their C-130, completed the engine runup, and were returning to the alert parking spot. Taxi clearance on the right side concerned the aircraft commander, so he stationed a scanner at the right side of the cockpit. There was also a wing walker on the right side, but none on the left.

Just before the aircraft began its turn into the parking spot, the engineer informed the crew of a cargo compartment overheat light. As the crew's attention was directed toward analyzing that problem, they continued to taxi—and moments later, the left wing struck a maintenance stand.

Pallet on the Loose

Shifting pallets have historically been a source of trouble for cargo haulers. Generally, they don't move far—but a recent, unscheduled pallet movement may have set a new distance record.

The Jumbo had just taken off on a local training sortie when an in-transit nose gear indication caught the crew's attention. Troubleshooting pinpointed a defective relay as the cause of the problem, and two crewmembers were dispatched to the cargo compartment to replace the part. As they worked on the problem, they heard an unusual noise, and turned to see a 7,500-pound ballast pallet beginning its record-setting journey. The improperly secured pallet rumbled aft from the number four pallet position, struck a deployed sidewall lock, turned through 45 degrees, and finally came to rest against the aft ramp. Fortunately, no one was in the path of the juggernaut, and only minor damage was done to equipment stored on the ramp. The crew chained the pallet firmly into its new position, and the Galaxy landed without further incident.

after deadline . . .

SABRELINER STORM AVOIDANCE -- MAC T-39's have had several recent run-ins with bad weather, and as usual, have come out on the short end of the stick. Two of our Sabreliners went IMC in an area of forecast CB activity and managed to find the CB's even without benefit of aircraft radar, while two others had engine flameouts above 40,000 feet while trying to top thunderstorms. Fortunately, the consequences of these incidents were minor, but the potential for serious aircraft damage or worse is obvious.

Vectors for weather avoidance may be a solution, particularly in those areas where independent weather radar is available. Although ARTCC controllers are not required to provide such service, they will usually do their best within the limitations of their equipment and workload.

Avoidance vectors are okay, but airborne radar is better. And when things really begin to look grim, the classic one-eighty may be the best solution of all.

SEE AND AVOID -- So far this year, MAC crews have reported 29 near-midair collisions as compared to 10 reported during the same period in 1975. Eight of the 29 occurred while both aircraft were operating on IFR clearances; the other 21 involved one IFR and one VFR aircraft, with the majority of these conflicts occurring during approach or departure.

Regardless of technological advances in traffic separation such as the Conflict Alert System, the best defense against midair collisions is still the Mark I Eyeball.

PFC -- Porous Friction Course -- designed to get you stopped -- on the runway. But it can be tricky. Watch for "Sub-Zero Defects" in the November issue.

INVESTIGATORS ARE SIFTING THROUGH the data and debris of the two C-141 accidents of 28 August. There is apparently no connection between the two accidents, and sabotage is not suspected. Further information will be released when the reports are final.

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